



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/619,111	07/14/2003	Deming Shu	ANL-IN-99-004b	5812

7590 03/23/2005

Joan Pennington
Unit 1804
535 North Michigan Avenue
Chicago, IL 60611

EXAMINER

TRAN, BINH X

ART UNIT	PAPER NUMBER
----------	--------------

1765

DATE MAILED: 03/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/619,111

Applicant(s)

SHU ET AL.

Examiner

Binh X Tran

Art Unit

1765

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 July 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 8-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 8 and 10-14 is/are rejected.
- 7) ☒ Claim(s) 9 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 7/14/2003.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities:

In the first line of the Specification, after the sentence "This application is a divisional application of Serial No. 09/930,699 filed on August 15, 2001", the examiner suggests to insert --now, US Patent 6,607,840--.

Appropriate correction is required.

Claim Objections

2. Claim 12 is objected to because of the following informalities: Claim 12 misses the period (".") at the end of the claim. The examiner suggests applicants to insert a period (".") at the end of the claim. Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 10-11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In line 3 of claim 10, "thin material" is subjective and indefinite. It is unclear from the claim, what specific thickness range that applicant consider as "thin".

In line 3 of claim 11, "thin metal material" is subjective and indefinite. It is unclear from the claim, what specific thickness range that applicant consider as "thin".

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 8, 11-14 are rejected under 35 U.S.C. 102(e) as being anticipated by Lee et al. (US 6,313,478).

Respect to claim 8, Lee discloses a method for producing a producing the redundantly constrained layer structure (read on "laminar structure") as a weak-link mechanism by lithographic technique comprising the step of:

repeatedly chemically etching a design pattern with a mask (i.e. resist mask) to produce a plurality of individual substantially identically units (215, 225)(Fig 5, col. 5 lines 39-54);

stacking the units together to form the sheet or layer structure (Fig 3, Fig 6).

Respect to claim 10-11, Lee discloses the plurality of individual identical units is formed of a thin metal film (col. 5 lines 5-20). Respect to claim 12, Lee discloses the step of repeatedly chemically etching a designed pattern having multiple weak-link connections (two weak link connections 215 and 225) with a mask (i.e. resist mask) to produce a plurality of individual substantially identical unit (col. 5). Respect to claim 13, Lee discloses the step of repeatedly chemically etching a designed pattern with a mask

Art Unit: 1765

to produce two individual substantially identical units (215, 225) (read on “produce a set number of individual substantially identical unit”).

Respect to claim 14, Lee does not explicitly disclose that set number of individual substantially identical units is selected for providing a predefined stiffness for the laminar structure. However, Lee clearly teaches that the laminar structure is made of plurality of individual substantially identical units formed of metal material. The stiffness value is the property of the material itself. A metal material must have a certain stiffness value (read on “predefined stiffness”). Since, Lee discloses the same structure having the same material with applicant’s structure, it is inherent that the set number of individual substantially identical units will provide a predefined stiffness for the laminar structure.

Allowable Subject Matter

7. Claim 9 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

8. The following is a statement of reasons for the indication of allowable subject matter: The cited prior arts fail to disclose or suggest the following step in conjunction with all other limitation in the claim: securing the stacked units together with fasteners received in predefined locating-holes in said units and applying an adhesive to the sides of the laminar structure to provide the mechanism equivalent to a single piece mechanism.

Conclusion

Art Unit: 1765

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Binh X Tran whose telephone number is (571) 272-1469. The examiner can normally be reached on Monday-Thursday and every other Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nadine Norton can be reached on (571) 272-1465. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Binh Tran

Binh X. Tran